

**NORTH CAROLINA DIVISION OF  
AIR QUALITY**

## Application Review

Issue Date: **ISSUE DATE**

**Region:** Asheville Regional Office  
**County:** Caldwell  
**NC Facility ID:** 1400100  
**Inspector's Name:** Patrick Ballard  
**Date of Last Inspection:** 12/13/2016  
**Compliance Code:** 3 / Compliance - inspection

<b>Facility Data</b>  <b>Applicant (Facility's Name):</b> NEPTCO, Inc.  <b>Facility Address:</b> NEPTCO, Inc. 2012 Hickory Boulevard Lenoir, NC 28645 <b>SIC:</b> 2671 / Paper Coated And Laminated Packaging <b>NAICS:</b> 326112 / Plastics Packaging Film and Sheet (including Laminated) Manufacturing  <b>Facility Classification: Before:</b> Title V <b>After:</b> <b>Fee Classification: Before:</b> Title V <b>After:</b>				<b>Permit Applicability (this application only)</b>  <b>SIP:</b> 02D .0515, .0516, .0521, 0524, .1100. 1111, .1806, 02Q .0317, .0705  <b>NSPS:</b> Subpart RR <b>NESHAP:</b> Subpart JJJ <b>PSD:</b> <b>PSD Avoidance:</b> <b>NC Toxics:</b> <b>112(r):</b> <b>Other:</b>					
<b>Contact Data</b>				<b>Application Data</b>					
<b>Facility Contact</b>  Kevin Poovey Plant Engineer (828) 292-2960 PO Box 1766 Lenoir, NC 28645+1766	<b>Authorized Contact</b>  Adam Chase President (781) 332-0731 295 University Ave. Westwood, MA 02090	<b>Technical Contact</b>  Sunil Hangal  (908) 469-1237 9 Smoke Rise Lane Bedminster, NJ 07921	<b>Application Number:</b> 1400100.15A <b>Date Received:</b> 10/01/2015 <b>Application Type:</b> Renewal <b>Application Schedule:</b> TV-Renewal <b>Existing Permit Data</b> <b>Existing Permit Number:</b> 04180/T20 <b>Existing Permit Issue Date:</b> 07/19/2011 <b>Existing Permit Expiration Date:</b> 06/30/2016						
<b>Total Actual emissions in TONS/YEAR:</b>									
CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP		
2015	0.0100	2.38	8.64	2.00	0.1800	3.51	3.51 [Toluene]		
2014	0.0200	2.60	15.20	2.18	0.2000	8.97	8.97 [Toluene]		
2013	0.0200	2.70	51.02	2.27	0.2100	9.61	9.61 [Toluene]		
2012	0.0100	2.20	54.34	0.4400	0.0700	2.57	2.57 [Toluene]		
2011	0.0200	2.69	49.21	0.5400	0.0800	7.55	7.55 [Toluene]		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <b>Review Engineer:</b> Charles Yirka   <b>Review Engineer's Signature:</b> </td> <td style="width: 50%; vertical-align: top;"> <b>Comments / Recommendations:</b>            Issue 04180/T21  <b>Permit Issue Date:</b> <b>INSERT DATE</b>  <b>Permit Expiration Date:</b> <b>INSERT DATE</b> </td> </tr> </table>								<b>Review Engineer:</b> Charles Yirka  <b>Review Engineer's Signature:</b>	<b>Comments / Recommendations:</b> Issue 04180/T21 <b>Permit Issue Date:</b> <b>INSERT DATE</b> <b>Permit Expiration Date:</b> <b>INSERT DATE</b>
<b>Review Engineer:</b> Charles Yirka  <b>Review Engineer's Signature:</b>	<b>Comments / Recommendations:</b> Issue 04180/T21 <b>Permit Issue Date:</b> <b>INSERT DATE</b> <b>Permit Expiration Date:</b> <b>INSERT DATE</b>								

## **I. Purpose of Application**

This permitting action is a renewal of an existing Title V permit pursuant to 02Q .0513. The existing Title V permit (**04180T19**) was issued on **July 19, 2011**, with an expiration date of **June 30, 2016**. The renewal application was received on **October 01, 2015**, or at least nine months prior to the expiration date. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

## **II. Facility Description**

This facility coats and laminates various types of material including polyester and polypropylene film, and aluminum foil with solvent-based adhesives. Solvents used in the processes included but are not limited to toluene, methyl ethyl ketone, and IPA. The laminated foil and plastic film are used primarily for shielding of coaxial cable used in the telecommunications industry. The facility also produces cover tape which is used in the production of antistatic packaging material for shipping microchips and other electronic devices. Additionally, the facility produces coated fabric for medical use. Emissions from this facility consist of VOCs/HAPs/Toxics from the solvent-based adhesives. When necessary, for compliance with MACT, Subpart JJJJ and NC Toxics, the emissions are controlled with thermal oxidizers. Total enclosures around the coating operations are required. The facility has at times manufactured pressure sensitive cover tape which is subject to NSPS Subpart RR. The facility is now using some water-based coatings.

## **III. History/Background/Application Chronology**

**July 19, 2011** – Permit **04180T19** issued by Mr. Mark Cuilla of the RCO as a Title V renewal.

**June 22, 2011** – Permit **04180T19** issued as a minor modification during the public comment period and EPA review period to replace control device (**ID No. CD-1**). The permit changes of that modification have been included in this renewed permit. See Kevin Godwin's **June 22, 2011** permit review for permit **04180T19** for details of that modification.

**February 28, 2012** - A Notice of Deficiency (NOD) was issued for a late submittal of a semi-annual report. The report was due on January 30, 2012 and received on February 17, 2012.

**April 25, 2017** – Sent out the 2<sup>nd</sup> draft permit and review for comment to by Mr. Patrick Ballard of the Asheville Regional Office (ARO). Received comments from Mr. Ballard on 2<sup>nd</sup> draft permit and review suggested we consider the removal of 02D .1100 Toxic Air Pollutants Emissions Limitations and Reporting Requirements as per Section IV of the review and noted the table of changes in the permit did not match.

**May 15, 2015** – Last compliance stack test report review issued by Mr. David Hughes of the Stationary Compliance Branch Compliance (SSCB) was indicated with both NSPS Subpart RR and MACT Subpart JJJJ for the overall VOC and HAP emissions reduction efficiency.

**October 1, 2015**– Permit application 1400100.15A received as a Title V permit renewal application. The application was deemed complete for processing.

**January 12, 2016** – Annual compliance inspection completed by Mr. Patrick Ballard.

**December 13, 2016** – Last annual compliance inspection completed by Mr. Patrick Ballard.

**March 7, 2017** – DRAFT permit sent to Acting Title V Supervisor Mr. Jefferson Twisdale for comment prior to public notice and EPA review.

**May 9, 2017** – DRAFT permit sent to Mr. Patrick Ballard, Mr. Samir Parekh of the SSCB, and Sunil Hangal consultant with ECAM for comment prior to public notice and EPA review.

**May 9, 2017** – Received response on DRAFT permit sent to Sunil Hangal for comment prior to public notice and EPA review. Mr. Hangal had no comments.

**INSERT DATE** – DRAFT permit sent to 30-day public notice and 45-day EPA review. The 30-day public comment period ended **INSERT DATE** with the receipt of no comments. The 45-day EPA review period ended **INSERT DATE** with the receipt of **X** comments.

#### IV. Permit Modifications/Changes and ESM Discussion

The following table describes the modifications to the current permit as part of the renewal process.

Pages	Section	Description of Changes
Cover Letter	-	-amended all dates, permit revision numbers and signature -removed paragraph associated with control device (ID No. CD-1) and previous minor modification of the Title V Air Permit
1	-	-amended all dates, application number, permit revision numbers and signature
All	Header	-amended permit revision number
3	I	- removed footnote associated with control device (ID No. CD-1) and previous minor modification of the Title V Air Permit
5	2.1 A (Table)	-removed reference to 15A NCAC 02D .0958 as this rule no longer applies. -removed reference to 15A NCAC 02Q .0705 as this rule no longer applies. -removed reference to 15A NCAC 02D .1100 as this rule no longer applies.
12	2.1 A.6.	- removed the permit conditions associated with regulation 15A NCAC 02D .1100 as this rule no longer applies.
14-15	2.2 A (Table)  2.2 A. 2.  2.2 A. 3.	-removed reference to 15A NCAC 02D .0958 as this rule no longer applies. -removed reference to 15A NCAC 02Q .0705 as this rule no longer applies. - removed the permit conditions associated with regulation 15A NCAC 02D .0958 as this rule no longer applies. - removed the permit conditions associated with regulation 15A NCAC 02Q .0705 as this rule no longer applies.
26-36	General Conditions	-updated shell conditions (version 4.0)

Changes, if any, to the Title V equipment editor were approved by Ms. Jenny Sheppard of the Raleigh Central Office (RCO) Permitting Section on **INSERT DATE**.

## V. Regulatory Review

The facility is currently subject to the following regulations:

15A NCAC 02D .0515, Particulates from Miscellaneous Industrial Processes  
15A NCAC 02D .0516, Sulfur Dioxide Emissions from Combustion Sources  
15A NCAC 02D .0521, Control of Visible Emissions  
15A NCAC 02D .0524, New Source Performance Standards (40 CFR 60, Subpart RR)  
15A NCAC 02D .1100, Control of Toxic Air Pollutants  
15A NCAC 02D .1111, Maximum Achievable Control Technology (40 CFR 63, Subpart JJJJ)  
15A NCAC 02D .1806, Control and Prohibition of Odorous Emissions  
15A NCAC 02Q .0317, Avoidance Conditions (for 15A NCAC 02D .0530, Prevention of Significant Deterioration)  
15A NCAC 02Q .0705, Existing Facilities and SIC Calls

A regulatory review for these current permit conditions will not be included in this document with the following exceptions.

Note that 02D .0902 was modified on November 1, 2016, such that 02D .0958 no longer applies to the facility.

Note that the state applicable only regulation 02D. 1100 was removed from the permit as requested by the applicant. The removal of the regulation is tied to the applicability of the last applicable MACT and the finding of “no adverse impact on human health” by this Office.

## VI. Compliance Statement (Five-Year Compliance History)

**February 28, 2012** - A Notice of Deficiency (NOD) was issued for a late submittal of a semi-annual report. The report was due on January 30, 2012 and received on February 17, 2012.

## VII. NSPS, NESHAPS/MACT, PSD, 112(r), CAM

**NSPS** – The facility’s five polymer film and metal foil coating and laminating operations (**ID Nos. ES101 through ES105**) are each subject to 40 CFR 60, Subpart RR, Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations. This Subpart establishes levels of compliance requirements based on the amount of VOC input per 12-month period when manufacturing pressure sensitive tape and/or label material. For levels of VOC input less than or equal to 45Mg per 12-month period, the Permittee is only required to maintain records of solvents applied by each coating line and submit semiannual summary reports of monitoring and recordkeeping activities. For levels of VOC input greater than 45 Mg per 12-month period, the Permittee is required to meet emission limits, complete performance tests, perform monitoring and recordkeeping as well as submit semiannual summary reports of all activities. It should be noted that per 60.440(b), once the VOC input for a production line exceeds this threshold, it becomes subject and is required to remain subject to the emission standards. The latest inspection report indicates that the facility is in compliance with these requirements. This permit renewal does not affect this status.

**NESHAPS/MACT** – The facility’s five polymer film and metal foil coating and laminating operations (**ID Nos. ES101 through ES105**) are each subject to 40 CFR 63, Subpart JJJJ, National Emission Standards for Hazardous Air Pollutants for Paper and Other Web Coatings. This Subpart applies to the collection of all web coating lines at the facility including lines engaged in the coating

of metal webs that are used in flexible packaging, and web coating lines engaged in the coating of fabric substrates for use in pressure sensitive tape and abrasive materials. The current permit condition lists emission standards, operating limits, monitoring requirements, performance test requirements, compliance demonstration requirements, notification, reporting, and recordkeeping requirements. This permit renewal does not affect this status.

**PSD** – The facility’s five polymer film and metal foil coating and laminating operations (**ID Nos. ES101 through ES105**) and mixing room (**ID No. F1**) are collectively subject to a 250 tons per year volatile organic compound PSD avoidance limit. The Permittee is required to calculate VOC emissions on a monthly basis to ensure compliance with this limit taking into account the total amount of each type of VOC-containing material consumed, the VOC content of the material, and capture and control efficiencies of the control devices. The Permittee is also required to perform periodic inspections and maintenance on the control devices and monitor the operating temperatures of the control devices by using continuous temperature monitors. Recordkeeping and reporting are also required. This permit renewal does not affect this status.

It should be noted that Section 2.1 A.5.c requires that the Permittee test oxidizer (**ID No. CD2**) for VOC destruction efficiency and capture efficiency and determine the average operating temperature of each device. Similar testing for the other control devices at the facility has previously been completed. This control device, as noted by Mike Parking of the ARO, is no longer functioning. Currently, the Permittee only runs non-VOC containing (i.e., water based coatings) in this line (**ID No. ES103**). The permit condition requires that the Permittee complete the testing within 90 days of resuming use of VOC-based coatings in this line. This permit renewal does not affect this status.

**112(r)** – The facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store one or more of the regulated substances in quantities above the thresholds in the Rule. This permit renewal does not affect this status.

**CAM** – This permit renewal does not affect this status of the CAM currently in the permit. CAM was established under the last Title V permit renewal and follows below.

40 CFR 64 requires that a continuous compliance assurance monitoring plan be developed for all equipment located at a major facility, that have pre-controlled emissions above the major source threshold, and use a control device to meet an applicable standard. The following table indicates the current emission source/control device relationships:

<b>Emission Source ID No.</b>	<b>Emission Source Description</b>	<b>Control Device ID No.</b>	<b>Control Device Description</b>
ES101 and ES102	Two polymer film and metal foil coating and laminating operations with natural gas-fired dryers (2.0 and 1.6 million Btu per hour maximum heat input capacity, respectively) with permanent total enclosures	CD1	One natural gas-fired thermal oxidizer (4.5 million Btu per hour maximum heat input capacity)
ES103	One polymer film and metal foil coating and laminating operation with natural gas-fired dryer (3.83 million Btu per hour maximum heat input) with permanent total enclosure	CD2	One natural gas-fired thermal oxidizer (2.02 million Btu per hour maximum heat input capacity)

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES104	One polymer film and metal foil coating and laminating operation with natural gas-fired dryer (5.6 million Btu per hour maximum heat input capacity) with permanent total enclosure	CD3	One natural gas-fired thermal oxidizer (3.2 million Btu per hour maximum heat input capacity)
ES105	One polymer film and metal foil tandem coating and laminating operation with natural gas-fired dryer (14.5 million Btu per hour maximum heat input capacity) with permanent total enclosure	CD4	One natural gas-fired thermal oxidizer (10.0 million Btu per hour maximum heat input capacity)

The following table outlines the specific permit conditions for each source/control device arrangement and if the control device is installed to comply with that requirement:

Emission Source ID No(s).	Control Device ID No(s).	Permit Condition(s)*	Control Equipment Installed to Meet Permit Limit?
ES101 through ES105	CD1 through CD4	15A NCAC 02D .0515 15A NCAC 02D .0516 15A NCAC 02D .0524 15A NCAC 02Q .0317 15A NCAC 02D .1111	Particulate matter. No Sulfur dioxide. No <b>Volatile organic compounds. Yes</b> <b>Volatile organic compounds. Yes</b> <b>Hazardous air pollutants. Yes</b>

\* The following permit conditions, where applicable, are not included in the CAM analysis:

1. 15A NCAC 02D .0521 – This regulation limits visible emissions to specific opacity levels based on equipment manufacture date. Visible emissions are not criteria pollutants subject to CAM analysis.
2. 15A NCAC 02D .1100 and 15A NCAC 02Q .0705 – These regulations define State-enforceable emission limits for toxic air pollutants. These emission limits are not criteria pollutants subject to CAM analysis.
3. 15A NCAC 02D .0958 – This regulation defines work practices for sources of volatile organic compound emissions. Work practices are not emission limits subject to CAM analysis.<sup>1</sup>
4. 15A NCAC 02D .1806 – This regulation limits odorous emissions from the facility. Odors are not criteria pollutants subject to CAM analysis.

<sup>1</sup> Note that 02D .0902 was modified on November 1, 2016, such that 02D .0958 no longer applies to the facility. On November 1, 2016, amendments to 15A NCAC 02D .0902 were finalized to narrow applicability of work practice standards in 15A NCAC 02D .0958 from statewide to the maintenance area for the 1997 8-hour ozone standard. This change is being made primarily because the abundance of biogenic VOC emissions in North Carolina results in ozone formation being limited by the amount of available nitrogen oxides (NOx) emissions. Provisions of the Clean Air Act require VOC requirements previously implemented in an ozone nonattainment area prior to redesignation remain in place. However, facilities outside the maintenance area counties for the 1997 8-hour ozone standard would no longer be required to comply with the work practice standards in 02D .0958. Caldwell County was not in nonattainment for the 1997 8-hr ozone standard and 02D .0958 is no longer applicable to facilities within the county. The permit condition for 02D .0958 will be removed under this permit modification.

As indicated above, the following permit conditions must be evaluated for CAM applicability as the control device is installed to meet an applicable emission limit for that pollutant:

1. 15A NCAC 02D .0524, New Source Performance Standards. As indicated above, the Permittee operates five coating and laminating lines subject to 40 CFR 60, Subpart RR (Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations). Per 15A NCAC 02D .0614(b)(1)(A), CAM is not applicable to these control devices for this regulation because the facility is subject to an “*emission limitation or standard proposed by the Administrator of the Environmental Protection Agency after November 15, 1990 pursuant to Section 111 or 112 of the federal Clean Air Act.*” Subpart JJJJ is a Section 111 emission limit/standard proposed and promulgated pre-1990. However applicable sections of the standard to this pollutant were proposed and promulgated post-1990; therefore, it meets the exclusion criteria of this paragraph. CAM does not apply.
2. 15A NCAC 02D .1111, Maximum Achievable Control Technology Standards. As indicated above, the Permittee operates five coating and laminating lines subject to 40 CFR 63, Subpart JJJJ (National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coatings). Per 15A NCAC 02D .0614(b)(1)(A), CAM is not applicable to these control devices for this regulation because the facility is subject to an “*emission limitation or standard proposed by the Administrator of the Environmental Protection Agency after November 15, 1990 pursuant to Section 111 or 112 of the federal Clean Air Act.*” Subpart JJJJ is a Section 112 emission limit/standard proposed and promulgated post-1990; therefore, it meets the exclusion criteria of this paragraph. CAM does not apply.
3. 15A NCAC 02Q .0317, Avoidance Conditions. As indicated above, the Permittee currently operates under a facility-wide volatile organic compound emission limit of 250 tons per year in order to avoid applicability of 15A NCAC 02D .0530, Prevention of Significant Deterioration. Per 15A NCAC 02D .0614(b)(1)(E), CAM is not applicable to these control devices for this regulation because the facility is subject to “*an emission cap that is approved under the rules of this Subchapter and Subchapter 15A NCAC 02Q and incorporated in a permit issued under 15A NCAC 02Q .0500.*” This avoidance condition constitutes an applicable emissions cap; therefore, CAM does not apply.

## **VIII. Facility Wide Air Toxics**

The applicant has made a request to remove the applicable regulation 02D .1100, the associated conditions and the NC toxic air pollutant (TAP) limits now found in the current permit.

The basis of these limitations was a modeling demonstration submitted in January 22, 2004. Per 15A NCAC 2Q .0705 this demonstration was submitted when the last MACT applied. The compliance date for this MACT Subpart JJJJ was December 5, 2005. There is now an exemption from this regulation as per 02Q .0702(a)(27)(b). This rule indicates an affected emissions sources subject to 40 CFR 63 (MACT) do not require a permit to emit toxic air pollutants.

On June 21, 2012, the North Carolina General Assembly passed air toxics reform legislation HB 952. The bill was signed by the governor, and has become law. Under the bill, any source that is covered under a MACT or Generally Achievable Control Technology (GACT) standards and any source covered under a 112(j) permit is exempt from regulation under the state air toxics rule, except in those circumstances when the Division of Air Quality (DAQ) Director makes a written finding that emissions from such a source present an unacceptable risk to human health.

The facility's five polymer film and metal foil coating and laminating operations (**ID Nos. ES101 through ES105**) were subject to modeled emission rates for methyl ethyl ketone, toluene, ethyl acetate, and hexane (**ID No. ES103 only**) per 15A NCAC 02D .1100. To ensure compliance with these limits, the Permittee was required to operate the thermal oxidizers (**ID Nos. CD1 through CD4**) whenever coatings containing these toxic air pollutants OR any other toxic air pollutant listed in 15A NCAC 02D .1104 are used. In addition, the Permittee was required to maintain the oxidizer operating temperatures at a 1-hour average operating temperature of no less than 50 degrees Fahrenheit below the average temperature measured from the most recent test of the control device.

The 02D .1100 regulation, NC toxic air pollutant (TAP) limits and the associated conditions now found in the current permit were removed for the following reasons:

It appears the permit was designed to allow the control devices to be turned on and off as long as compliance, e.g., PSD avoidance, could be demonstrated. Now the MACT affected sources are **always** controlled by thermal oxidizers thereby controlling HAPS and incidentally the TAPs that are HAPs and TAPs that are not HAPs;

The existing 02D .1100 condition does not require a calculation of actual TAP emissions to show compliance with the TAP limits. Also, the condition only requires monitoring of the control device operation temperatures based on the MACT testing. This continuous monitoring of temperature appears to be similar to what is required by the MACT.

The January 22, 2004 modeling indicated modeling done at 95% of the AAL for 24-hr AALs for MEK, toluene, and hexane. The analysis indicated that the maximum impact was 20% (toluene), 11% (ethyl acetate), and 10% (MEK) of their respective 1-hr AALs; and

The actual emissions hourly and daily TAP emissions rates estimated from the 2015 emissions inventory summary appear to be insignificant compared to the 02D .1100 emissions limitations.

As such, this reviewer recommends the removal of the 02D .1100 regulation, NC toxic air pollutant (TAP) limits and the associated conditions now found in the current permit. In conformance with HB952 it does not appear emissions from these sources present an unacceptable risk to human health.

## **IX. Facility Emissions Review**

See Page 1 of this Title V Air Permit Review for a history of total actual emissions in tons per year. There is no change in emissions for this renewal.

## **X. Stipulation Review**

The facility was last inspected by Mr. Patrick Ballard of the ARO on **December 13, 2016**. Based on his observations the facility appeared to be operating in compliance with their Title V permit requirements.

## **XI. Public Notice/EPA and Affected State(s) Review**

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall

be provided to each affected State at or before the time notice provided to the public under 02Q .0521 above. The State of Tennessee is an affected State within 50 miles of this facility.

## **XII. Conclusions, Comments, and Recommendations**

A professional engineer's seal was not required for this renewal.

A zoning consistency determination was not required for this renewal.

ARO recommends issuance of the permit and was sent a DRAFT permit prior to issuance (See Section III of this document for a discussion).

RCO concurs with ARO's recommendation to issue the renewed air permit.

DRAFT